

**CLAIMS**

1. A machine tool accessory including a shank for  
releasably attaching the accessory to a spindle of a  
5 machine tool, the shank being attachable to the spindle  
in a plurality of orientations and having electrical  
contacts for electrical communication with  
complementary electrical contacts at the spindle, the  
accessory further including a circuit for determining  
10 the orientation of the contacts of the shank relative  
to complementary contacts at the spindle.

2. A machine tool accessory as claimed in claim 1  
wherein the spindle is rotatable about an axis and  
15 wherein the shank of the accessory is attachable to the  
spindle in any orientation about the axis.

3. A machine tool accessory as claimed in claim 2  
wherein the number of contacts at the shank is greater  
20 than the number of complementary contacts at the  
spindle.

4. A machine tool accessory as claimed in any one  
preceding claim wherein the circuit comprises a  
25 plurality of multi-way switches, switchable to route a  
contact appropriately.

5. A machine tool accessory as claimed in claim 4  
wherein the circuit includes a voltage or current  
30 detection device for detecting the presence of voltage  
across the contacts or for detecting current flowing  
through the contacts and for causing the appropriate  
switching of the switches.

6. A machine tool accessory as claimed in claim 4 or 5 wherein the circuit is operable to detect impedance across the complementary contacts.

5 7. A machine tool accessory as claimed in any one preceding claim wherein the contacts provide a route for power and signal to/from the accessory.

8. A machine tool accessory as claimed in any one  
10 preceding claim wherein the circuit is powered by a power supply from the contacts.

9. A machine tool accessory as claimed in any one preceding claim wherein the contacts comprise at least  
15 three contacts.

10. A machine tool accessory as claimed in any one preceding claim wherein the shank comprises a male taper and the contacts are disposed on or adjacent the  
20 taper.

11. A machine tool comprising a stationary part;  
a rotatable spindle;  
and a machine tool accessory having a shank;  
25 the spindle having a shank receiving area for releasably accepting in a plurality of orientations the shank of the machine tool accessory;

the machine tool further comprising a first electrical link between the stationary part and the  
30 spindle and a second electrical link between the spindle and the shank in the form of a plurality of electrical contacts at the shank and a plurality of complementary electrical contacts at the shank receiving area of the spindle, the contacts being

arranged such that each is connectable to any one of the complementary contacts.

12. A machine tool as claimed in claim 10 wherein the  
5 accessory is as claimed in any one claims 1 to 9.

13. A machine tool as claimed in claim 12 wherein a liquid seal is provided between the shank and the spindle.